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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,415	03/25/2002	Joerg Petzold	47192/265662	1808

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EXAMINER	
GLENN, KIMBERLY E	
ART UNIT	**PAPER NUMBER**
2817	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,415	PETZOLD ET AL.	
	Examiner	Art Unit	
	Kimberly E Glenn	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☒ Claim(s) *12-14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/13/02 7/09/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biran et al US Patent 5,627,501(of record) in view of Kobayashi US Patent 3,683,271 in combination with Petzold WO 99/45643.

Biran et al discloses an ADSL comprising a low pass filter LPF and high pass filter HPF. The low pass filter contains multiple inductive components comprised of magnetic cores.

Thus, Biran et al is shown to teach all the limitations of the claims with the exception of the high pass filter having multiple inductive components comprising magnetic cores made of an amorphous or nanocrystalline alloy.

Kobayashi teaches in prior art figure 1, a high pass filter comprising of inductors L1 and L2 and capacitors C1 and C2. The inductors consist of a core with winding wound around it a few turns. The core is made of ferromagnetic material. (Column 3, lines 32 through 62)

Petzold disclose a magnetic core made of an amorphous or nanocrystalline alloy. Petzold states that amorphous and nanocrystalline alloys make it possible to produce magnetic cores with high saturation induction and a broad range of permeability values. Petzold teach the alloy having the following composition:

First Alloy System

$Co_a (Fe_{1-x} Mn_x)_b Ni_d M_e Si_x B_y C_z$, the alloy has the composition $Co_a (Fe_{1-x} Mn_x)_b Ni_d M_e Si_x B_y C_z$, where M is one or more elements from among the group Nb, Mo, Ta, Cr, W, Ge and P and a+b+c+d+e+x+y+z=100, where:

Co	a = 40-82 at %
Mn/Fe	x = 0-1
Fe + Mn	b = 3-10 at %
Ni	d = 0-30 at %
M	e = 0-5 at %
Si	x = 0-15 at %
B	y = 8-26 at %
C	z = 0-3 at % where 15<e+x+y+z<30.

The following relationship applies

Co	a = 50-82 at %
Mn/Fe	x = 0-0.5
Fe + Mn	b = 3-10 at %
Ni	d = 0-20 at %
M	e = 0-3 at %
Si	x = 1-15 at %
B	v = 8-20 at %
C	z = 0-3 at % where 18<e+x+y+z<25.

Second Alloy System

$Fe_x Cu_y M_z Si_v B_w$, where M is one or more elements from among the group Nb, W, Ta, Zr, Hf, Ti, Mo and x+y+z+v+w=100%, where:

Fe	x = 100% - y - z - v – w
Cu	y = 0.5 - 2 at %
M	z = 1 - 5 at %
Si	v = 6.5 - 18 at %
B	w = 5 - 14 at % where v+w>18 at %.

The following relationship applies

Fe	x = 100% - y - z - v - w
Cu	y = 1 at %
M	z = 2 - 3 at %
Si	v = 14 - 17 at %
B	w = 5 - 14 at % where v+w=22-24 at %.

Third Alloy System

$Fe_x Zr_y Nb_z B_v Cu_w$, where x+y+z+v+w=100 at %, where:

Fe	x = 100 at % - y - z - v – w
Zr	v = 2 - 5 at %
Nb	z = 2 - 5 at %
B	v = 5 - 9 at %
Cu	w = 0.5 - 1.5 at % where y+z>5 at % and y+z+v>11.

The follow relationship applies

Fe	x = 83 - 86 at %
Zr	y = 3 - 4 at %
Nb	z = 2 - 5 at %
B	v = 5 - 9 at %
Cu	w = 1 at % where x+z>7 at %, and y+z+v is 12-16 at %.

Fourth Alloy System

$Fe_x M_y Nb_z B_v Cu_w$, where M is an element from among the group Zr, Hf, Nb and x+y+z+w=100 at %, where:

Fe	x = 100 at % - y - z – w
M	y = 6 - 8 at %
B	z = 3 - 9 at %
Cu	w = 0 - 1.5 at %.

The following relationship applies

Fe	x = 83 - 90 at %
M	y = 7 at %
B	z = 3 - 9 at %
Cu	w = 0 - 1.5 at %.

Fifth Alloy System

$(Fe_{0.98}Co_{0.02})_{90-x}Zr_7B_{2+x}Cu_1$, where x=0-3, wherein Co may be replaced by Ni with a corresponding adjustment of the remaining alloy components. (Column 1 line 47-49 and claims 1, 4-13 of US Patent 6,559, 808 the equivalent to WO 99/45643)

One of ordinary skill in the art would have found it obvious to replace the general air core inductors of the high pass filter of Biran et al with the inductor consisting of a ferromagnetic core as taught by Kobayashi. The motivation for this modification would have been to provide the advantageous benefit of making the inductors variable.

One of ordinary skill in the art would have found to obvious to replace the general ferromagnetic material of Kobayashi with the amorphous or nanocrystalline alloy as taught by Petzold. The motivation for this modification would have been to provide a material, which is capable of producing a magnetic core with high saturation induction, and a broad rang of permeability values. (See column 1 lines 47-49 of the US Patent 6,559,808 the equivalent to WO 99/45643 reference)

Allowable Subject Matter

Claims 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Seddon US Patent 5,157,272, teach replacing a air core with a magnetic core in order to make the inductor variable based on the permeability of the magnetic core, Latour US Patent 1,601,400 and Barsellotti et al US Patent 6,177,849.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E Glenn whose telephone number is (571)-272-1761. The examiner can normally be reached on Monday-Friday 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly E Glenn
Examiner
Art Unit 2817

keg

Robert Pascal
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